

CLAIMS

What is claimed is:

1. A pouch-type lithium secondary battery, comprising:
a battery unit having a positive plate, a separator, and a negative plate;
a plurality of electrode tabs, drawn from the positive and negative plates, respectively;
a case, formed with a space receiving the battery unit and with upper and lower sealing surfaces which are thermally fused to each other; and
an insulating tape wrapping the electrode tabs, wherein an end portion of the insulating tape is exposed outside the case together with the electrode tabs and is positioned outside the upper or lower sealing surface after being folded.
2. The pouch-type lithium secondary battery according to claim 1, wherein the electrode tabs are folded, starting from an end portion of the upper or lower sealing surface, toward the case.
3. The pouch-type lithium secondary battery according to claim 2, wherein the insulating tape has a portion which comes in contact with the end portion of one of the upper and lower sealing surfaces when folded.
4. The pouch-type lithium secondary battery according to claim 3, wherein the contacted portion of the insulating tape completely wraps the electrode tab to provide electrical insulation between the electrode tab and the case.
5. The pouch-type lithium secondary battery according to claim 2, wherein the folded portion of the insulating tape is positioned outside one of the upper and lower sealing surfaces.
6. The pouch-type lithium secondary battery according to claim 2, wherein the folded portion of the insulating tape is at least 5% of a total width of the upper or lower sealing surface.

7. The pouch-type lithium secondary battery according to claim 6, wherein the folded portion of the insulating tape ranges from 5 to 90% of the total width of the upper or lower sealing surface.

8. The pouch-type lithium secondary battery according to claim 6, wherein the folded portion of the insulating tape ranges from 30 to 50% of the total width of the upper or lower sealing surface.

9. The pouch-type lithium secondary battery according to claim 1, wherein a portion of the insulating tape interposed between the upper and lower sealing surfaces is thermally fused to the upper and lower sealing surfaces.

10. A lithium battery, comprising:
a case, including upper and lower sealing surfaces thermally fused to each other, and a space housing a battery unit, the battery unit including a positive plate, a separator, and a negative plate;
a plurality of electrode tabs, drawn from the positive and negative plates, respectively;
and
an insulating tape wrapping the electrode tabs, wherein an end portion of the insulating tape together with the electrode tabs extends beyond the case and is positioned outside the upper or lower sealing surface after being folded.

11. The lithium battery according to claim 10, wherein the plurality of electrode tabs are folded, from an end portion of the upper or lower sealing surface, toward the case.

12. The lithium battery according to claim 11, wherein the insulating tape has a portion which comes in contact with the end portion of one of the upper and lower sealing surfaces when folded.

13. The lithium battery according to claim 12, wherein the contacted portion of the insulating tape completely wraps the electrode tab to provide electrical insulation between the electrode tab and the case.

14. The lithium battery according to claim 11, wherein the folded portion of the insulating tape is positioned outside one of the upper and lower sealing surfaces.

15. The lithium battery according to claim 11, wherein the folded portion of the insulating tape is at least 5% of a total width of the upper or lower sealing surface.

16. The lithium battery according to claim 15, wherein the folded portion of the insulating tape ranges from 5 to 90% of the total width of the upper or lower sealing surface.

17. The lithium battery according to claim 15, wherein the folded portion of the insulating tape ranges from 30 to 50% of the total width of the upper or lower sealing surface.

18. The lithium battery according to claim 10, wherein a portion of the insulating tape interposed between the upper and lower sealing surfaces is thermally fused to the upper and lower sealing surfaces.